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resistant material capable of providing a solid stream and a spray pattern.

(4) A fire hose on a vessel 79 feet (24 meters) or more in length must be lined commercial fire hose and be fitted with a nozzle made of corrosion resistant material capable of providing a solid stream and a spray pattern.

§ 28.320 Fixed gas fire extinguishing systems.

- (a) Requirements for vessels 79 feet (24 meters) or more in length. A vessel 79 feet (24 meters) or more in length must be fitted with a fixed gas fire extinguishing system in the following enclosed spaces:
- (1) A space containing an internal combustion engine of more than 50 horsepower;
- (2) A space containing an oil fired boiler:
 - (3) An incinerator and;
- (4) A space containing a gasoline storage tank.
- (b) System types and alternatives. (1) A pre-engineered fixed gas fire extinguishing system may be installed only in a normally unoccupied machinery space, paint locker, or space containing flammable liquid stores that has a gross volume of not more than 33.98 cubic meters (1200 cubic feet).
- (2) A fixed gas fire extinguishing system that is capable of automatic discharge upon heat detection may be installed only in a normally unoccupied space with a gross volume of not more than 169.92 cubic meters (6000 cubic feet).
- (3) A space with a gross volume exceeding 169.92 cubic meters (6000 cubic feet) must be fitted with a manually actuated and alarmed fixed gas fire extinguishing system.
- (c) General requirements. (1) A fixed gas fire extinguishing system aboard a vessel must be approved by the Commandant and be custom engineered, unless the system meets the requirements for a pre-engineered fixed gas fire extinguishing system in paragraph (d) of this section.
- (2) System components must be listed and labeled by an independent, nationally recognized testing laboratory for the system being installed.
- (3) System design and installation must be in accordance with the Manu-

facturer's Marine Design, Installation, Operation, and Maintenance Manual approved for the system by the Commandant.

- (4) A fixed gas fire extinguishing system may protect more than one space. The quantity of extinguishing agent must be at least sufficient for the largest space protected by the system.
- (d) Pre-engineered fixed gas fire extinguishing systems. (1) A pre-engineered fixed gas fire extinguishing system must:
 - (i) Be approved by the Commandant;
- (ii) Be capable of manual actuation from outside the space in addition to any automatic actuation devices; and
- (iii) Automatically shut down all power ventilation systems serving the protected space and all engines that draw intake air from within the protected space.
- (2) A vessel on which a pre-engineered fixed gas fire extinguishing system is installed must have the following equipment at the operating station:
- (i) A visual alarm to indicate the discharge of the extinguishing agent;
- (ii) An audible alarm to sound upon discharge of the extinguishing agent; and
- (iii) A means to reset devices used to automatically shut down ventilation systems and engines as required by paragraph (d)(1)(iii) of this section.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 96–046, 61 FR 57275, Nov. 5, 1996]

$\S 28.325$ Fire detection systems.

- (a) Each accommodation space must be equipped with an independent modular smoke detector or a smoke actuated fire detecting unit installed in accordance with 46 CFR part 76, subpart 76.33.
- (b) An independent modular smoke detector must meet UL 217 and be listed as a "Single Station Smoke Detector—Also suitable for use in Recreational Vehicles."

§ 28.330 Galley hood and other fire protection equipment.

(a) Each vessel must be fitted with a grease extraction hood complying with UL 710 above each grill, broiler, and deep fat fryer.